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NATIONAL ASSOCIATION of CORPORATION SCHOOLS

Bulletin

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Volume III

Engineering
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June, 1916

Association Activities

Educational Courses of the Tide Water Oil Company

By B. D. Benson

Apprentice Systems Westinghouse Air Brake Company

By C. H. Smith

Unusual Educational Developments

Nation-wide Body to Aid Agriculture

PUBLISHED BY ORDER OF THE
EXECUTIVE COMMITTEE

The National Association of Corporation Schools

Headquarters, Irving Place and 15th Street, New York City

Objects

Corporations are realizing more and more the importance of education in the efficient management of their business. The Company school has been sufficiently tried out as a method of increasing efficiency to warrant its continuance as an industrial factor.

The National Association of Corporation Schools aims to render new corporation schools successful from the start by warning them against the pitfalls into which others have fallen, and to provide a forum where corporation school officers may interchange experiences. The control is vested entirely in the member corporations, thus admitting only so much of theory and extraneous activities as the corporations themselves feel will be beneficial and will return dividends on their investment in time and membership fees.

A central office is maintained where information is gathered, arranged and classified regarding every phase of industrial education. This is available to all corporations, companies, firms or individuals who now maintain or desire to institute educational courses upon becoming members of the Association.

Functions

The functions of the Association are threefold: to develop the efficiency of the individual employe; to increase efficiency in industry; to have the courses in established educational institutions modified to meet more fully the needs of industry.

Membership

From the Constitution—Article III.

SECTION 1.—Members shall be divided into three classes: Class A (Company Members) Class B (Members), Class C (Associate Members).

SECTION 2.—Class A members shall be commercial, industrial, transportation or governmental organizations, whether under corporation, firm or individual ownership, which now are or may be interested in the education of their employes. They shall be entitled, through their properly accredited representatives, to attend all meetings of the Association, to vote and to hold office.

SECTION 3.—Class B members shall be officers, managers or instructors of schools conducted by corporations that are Class A members. They shall be entitled to hold office and attend all general meetings of the Association.

SECTION 4.—Class C members shall be those not eligible for membership in Class A or Class B who are in sympathy with the objects of the Association.

Dues

From the Constitution—Article VII.

SECTION 1.—The annual dues of Class A members shall be \$50.00.

SECTION 2.—The annual dues of Class B members shall be \$5.00 and the annual dues of Class C members shall be \$10.00.

SECTION 3.—All dues shall be payable in advance and shall cover the calendar year. Any members in arrears for three months shall be dropped by the Executive Committee unless in its judgment sufficient reasons exist for continuing members on the roll.

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The New York Edison Company

The National Association of Corporation Schools

Bulletin

Published by Order of the Executive Committee
Edited by F. C. Henderschott, Executive Secretary

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Volume III

June, 1916

No. 6

HOW HARVARD PREPARES YOUNG MEN FOR BUSINESS

Professor Edmund F. Gay, Dean of the graduating school of Business Administration at Harvard, recently granted an interview in which he set forth the policy of that institution.

"The school," says Prof. Gay, is "frankly a theoretical academic institution." During the school year the student studies the theory of business; but on the principle that theory is of little use unless applied, the student is supposed to take a position for the summer, and to be thrown upon his own resources for a job and maintenance.

"Any student would learn in an actual business organization in six months what we couldn't teach him in six years," said he. "We are there to teach the theory; the practical experience he must get for himself. And the summer is the time for him to do this. Many of our students come from homes where they have lived a sheltered existence, and have never earned a dollar in their lives. They do not know the value of money, or anything about the exigencies of work. They will ultimately go into business and become employers of men.

"It is absolutely essential that boys who are going to hire men shall have lived themselves as employes; not only as employes, but with them, as they live, and on an employe's wages of so many dollars a week. It is important for a young man to find out if he is worth \$10 a week to any employer. To do this, he does not go to work as an apprentice; in his summer job he is not taught anything, nor does he serve free of charge. He must simply begin at the bottom of the ladder and be put to work, in any job he can get. The only requirement we make is that if he is not worth \$10 a week at the end of six weeks, the employer will please discharge him and state the reasons to us. We have had only one discharge."

During the school year the student acquires business knowledge in two ways. Business men of experience come to the school and give talks on their work; and the student goes into the offices of business firms as an employee. For this service, in distinction to the rule in his summary work, he does not receive any wages. It has been found, according to Prof. Gay, that when he is paid he has "a divided responsibility and a divided duty." He cannot serve two masters. Therefore, so long as he is working under the direction of the school, he works without pay, and gets the practical experience for observation purposes solely.

Each man is given a chance for practical experience in the field that he chooses. Young men are sent on the road as traveling salesmen, with goods to sell, reports to make, expense accounts to keep, and a regular salary of \$50 a month plus expenses, paid by the school. They are required to make good, just as though they were working independently; if they do not make good, they are "fired."

HIGH SCHOOLS' GROWTH

That an evolution of schools devoted to secondary education is in progress all over the country has been brought out by the United States bureau of education by a recent survey, says the *Washington Star*. In numerous ways, it is shown, the school system is steadily changing, so as to reach a greater and greater percentage of the child population and to give to the pupils an education that is better fitted to their individual needs than that which has been given in the past. In the last 10 years, it was found, the number of public high schools has increased from less than 8,000 to nearly 12,000, while the aggregate enrollment has climbed from less than 680,000 to approximately 1,220,000.

One of the marked changes disclosed by the survey is the growth of the "junior high school," which covers usually the work of the seventh, eighth and a portion of the ninth grades, and which is designed to furnish a more flexible course and to give pupils an opportunity in a special school for more rapid advancement. Direct state aid to high schools is a growing practice, it was found, the aid being especially marked in the matter of rural high schools.

Other developments in secondary education were found to be the growth of vocational courses, the growing adoption of the half-time school and half-time shop plan, the increase in the con-

ducting of high school summer sessions, and in the appointment of special advisers to conduct social guidance projects.

BUSINESS AND ART CALL 401 WOMEN GRADUATES OF U. W.

Everything which a woman can do—from writing stories and performing on the concert and vaudeville stage, to homesteading and beekeeping—has been undertaken by alumnae of the University of Wisconsin, according to the records of the Alumni Association.

Aside from the largest profession, teaching, and aside from those who have married and who are not in business, there are 401 women graduates who represent Wisconsin in the business and professional world:

DEMANDING EQUAL EDUCATIONAL OPPORTUNITIES

In a recent address before the Central Labor Union of Boston, Mr. G. S. Field, Director of Vocational and Evening Schools of that city, said:

“Under the guise of being democratic, our public schools have opened their doors to all. Opportunities adapted only to the needs of the few have been offered. Those whose needs were not met left school to enter employment. The public schools will be truly democratic only when there is opportunity for each pupil to satisfy his individual needs as an industrial unit and as a citizen. Who shall say which children shall be trained, and which left in ignorance? Who shall say that the high school pupils shall receive a public expenditure of \$80 per year, while the child who works receives nothing? Who shall say that society is less responsible for one than the other?”

Mr. Field believed the period at which school specialization should begin was before the end of the term of compulsory school attendance. “At the age of 12, or soon thereafter, children might well begin to formulate their tentative program leading to wise vocational selection,” he declared. It is not so important that the child shall select at this early age the vocation which he will later follow, as it is for the child to have a vocational aim which will act as an educational incentive. At the end of the compulsory school period it often becomes necessary for the children to turn their attention to preparation for a livelihood. Parents and chil-

dren alike have seen but little preparation for a livelihood in the training given by the regular schools. In some cities manual training has been offered, and in a few cities industrial schools have been preparing a limited number of callings. But this, though good, does not go far enough.

MAKING A PRACTICAL APPLICATION OF THEORY

As teachers in commercial high schools are becoming more familiar with their tasks they are feeling the need of some sort of practical laboratory work in connection with their teaching in order to make the courses vital to the pupils.

Mr. E. D. Pannell, who teaches bookkeeping in the commercial department of East High School, Minneapolis, pointed out in an article recently that the industrial courses have their turning lathes, forges and other implements with which the students do actual work, whereas those studying salesmanship, bookkeeping, stenography and similar subjects have no method by which they can make a practical application of the theories which they are studying.

This is one of the new problems which must be solved in connection with introducing more instruction on commercial subjects in the public schools.

SHALL THE FEDERAL GOVERNMENT HELP FINANCE VOCATIONAL TRAINING?

A new and important measure has been inaugurated by the Chamber of Commerce of the United States in connection with the bill providing Federal aid for vocational education. The Chamber of Commerce is conducting a referendum among the commercial organizations to determine whether or not business interests favor the Federal government making preparation for vocational training. It is the opinion of the committee conducting the referendum that the Federal government should at once extend its aid to the states for training in trade and industrial subjects, just as it has with great success and national benefit for many years assisted the states in agricultural instruction. The committee believes, too, that the Federal government should lend its aid to the states for further vocational education for agricultural pursuits.

WHY LONDON IS THE WORLD'S COMMERCIAL CENTER

"The Americas," a publication issued by The National City Bank of New York, in its April number contains an article giving reasons why New York City is not the world's commercial center.

"When the outbreak first came, with a temporary disorganization of international connections everywhere, many hasty predictions were made about a great shift of the main streams of commerce away from its focus in Western Europe. Some thought that New York would suddenly become the business and financial center of the world. New York has greatly strengthened its position in the world's commerce and finance, but the commerce of the whole world has a weight too great to be suddenly shifted. Besides it is highly organized in a definite, intricately interlocking structure, and the trunk-lines have for centuries been growing in Western Europe. 'To him that hath shall be given.' Such great commercial centers as London and Hamburg not only have a vast volume of commerce permanently attached to them through direct control, but a vast volume of the free commerce of the world will go to them because of the facilities they have as great, organized commercial centers. The impetus of this is not easily deflected."

The writer proceeds to point out the fact that London has been free to trade since the war began and instead of losing control has proven what an asset of political and military strength her position in trade is to England as a by-product of English foreign commerce.

The writer further calls attention to the importance of Great Britain as a source of supply for raw materials and specifies certain materials which manufacturing countries are dependent upon for their supply.

England has a definite commercial policy as a nation and the British Government stands behind this policy. "But," says the writer, "the effective source of the power is really seated in certain important commercial institutions which London has by virtue of being the capital of the whole world's commerce. No other city or country can ever build up institutions to equal London's in any time short of decades.

"In time of peace commerce is of the whole world. With the modernization of communications that put the whole world in touch, and the spread of a spirit of international co-operation

in late years, commerce had begun to outgrow all localization. The whole world helped London build up its institutions; such institutions were already becoming international; they were interlocking all over the globe with little regard for any kind of boundary lines.

"The community or the section that is commercially wise will hereafter plan to make its own commercial institutions grow into the whole world's organization as strongly interworking parts of a mutually helpful system, because they will thus become most effective for the nation's own purposes. This article about London's institutions is printed not for the purpose of indicating that our own are primitive, or that we should attempt to rival London, but just because London's facilities are typical of the greater commerce into which this nation is now constructively working; they show how efficient trade machinery may be built up here, through which to work with London and the rest of the world in that greater commerce."

The writer gives a history of the development of trade covering a period of seven hundred years or since England wrote into the Magna Charter a public policy that had been established even earlier—the provision that foreign merchants could come freely into London trade without danger to lives or property.

The upbuilding of the great merchant marine, which has always been an important factor in the world's trade, is described and mention is also made of the great financial institutions centered in London through which trade may be provided with credit and in fact every financial requirement.

"Other rival nations have tried to build up consignment markets to equal London's and have confessed failure. These have been the slow growth of centuries of dovetailing circumstances.

"Into London's warehouses there pour yearly great volumes of materials coming to the markets from producing enterprises owned by English capital in all parts of the world. England also controls a large part of the supply of these simply through commercial enterprise. Other great financial centers have had international markets for securities, but none have carried on anything like the huge business of international financing that London's has. This international financing is one of the institutions producing permanent control of trade. The world has come to London not only to borrow, but to find employment for surplus capital. London's enormous speculative interests support huge

foreign investments of England as they insure the steady liquidity of its commodity markets."

The writer was careful to point out how the British Government has not only developed her great trade, but the system which has been employed in this development.

"London's commercial bodies specialize with great particularity. They join in a system of educating and training young men for commerce and of examining and rating others who have learned in the school of practical experience, so that even employment is standardized."

During recent years some of the larger manufacturing institutions of the United States have developed similar educational systems for training young men to hold positions of responsibility in foreign countries. Pioneers in this respect are the Standard Oil Company, United States Steel Corporation, The National Cash Register Company and The National City Bank of New York.

The writer of the article quotes reasons why New York City will not immediately take from London her prestige as the world's commercial center. But by the employment of educational methods in training for foreign commerce and adding the necessary facilities for the handling and financing of commerce New York can develop her position as a commercial center and ultimately rival London; indeed she may supplant her ancient rival.

VOCATIONAL GUIDANCE AND PSYCHOLOGY

A considerable number of those interested in finding a solution for the vocational guidance problem have expressed the opinion that psychology will ultimately prove the most helpful agency. Something has been done in applying psychology to industrial problems, but results available are too meager to be conclusive. There is, however, another side to the picture which must be studied and given due consideration before a final decision can be determined. William James, the eminent psychologist of Harvard University, applies the law of transiency and while he does not make the application to the problem in hand, his conclusions are interesting.

"If a boy grows up alone at the age of games and sports, and learns neither to play ball, nor row, nor sail, nor ride, nor skate, nor fish, nor shoot, probably he will be sedentary to the end of

his days; and, though the best opportunities be afforded him for learning these things later, it is a hundred to one but he will pass them by and shrink back from the effort of taking those necessary first steps the prospect of which, at an earlier age, would have filled him with eager delight. But with things learned in the plastic days of instinctive curiosity, we never lose entirely our sense of being at home. There remains a kinship, a sentiment of intimate acquaintance, which, even when we know we have failed to keep abreast of the subject, flatters us with a sense of power over it, and makes us feel not altogether out of the pale."

It was some few years ago that James reached his decisions. There have since been advances in psychology. There is an ever increasing number of the human family who through force of habit are keeping their minds upon, and eager welcoming, new knowledge. Perhaps the recent inventions resulting in implements and innovations which play such an important factor in modern living have contributed to this condition. Many there were who positively knew that the railroads, steamboats and other of the earlier factors which have contributed so much to modern living would never prove of value. With the advent of the telegraph, the telephone, the phonograph, the adding machine, the automobile, flying machine and the application of electricity for illuminating, power and heat, and the many other factors which are now common to every day life, the human mind has grown to expect the advent of additional factors and this has modified in some degree, at least, the conclusions as laid down by Mr. James.

"There is a happy moment for fixing skill in drawing, for making boys collectors in natural history, and presently dissectors and botanists; then for initiating them into the harmonies of mechanics and the wonders of physical and chemical law. Later, introspective psychology and the metaphysical and religious mysteries take their turn; and, last of all, the drama of human affairs and worldly wisdom in the widest sense of the term. In each of us a saturation-point is soon reached in all these things; the impetus of our purely intellectual zeal expires, and unless the topic be one associated with some urgent personal need that keeps our wits constantly whetted about it, we settle into an equilibrium, and live on what we learned when our interest was fresh and instinctive, without adding to the store. Outside of their own business, the ideas gained by men before they are twenty-five are practically the only ideas they shall have in their lives. They cannot get anything new. Disinterested curiosity is

past, the mental grooves and channels set, the power of assimilation gone. If by chance we ever do learn anything about some entirely new topic, we are afflicted with a strange sense of insecurity, and we fear to advance a resolute opinion."

There is, however, much that is inherent in the decision which this eminent psychologist gives as the result of his inquiries and deductions. Gradually we are letting go of the theory that we are pre-determined to make our greatest successes by following certain lines of work. History teaches that nations have lost great industries through the reluctance of the newer generations to follow in the occupations of their fathers. Other industries have grown up and so in modern times nothing seems fixed and definite.

The newer idea seems to be that if the boy is placed at his task at the psychological period of development in his life and kept at the task until habits are formed, he will pursue a similar line of work as his life's occupation. The measure of success will be determined in some degree at least by the measure of preparation in the way of fundamental education and the opportunities which are open to him as he progresses in his work.

DETROIT EMPLOYERS CALL CASS TECHNICAL HIGH SCHOOL GRADUATES

The Detroit, Michigan, *Journal* in commenting on the work of the Cass Technical High School of that city points out that the call educationally is now for industrial training. The demand is more and more insistent and must be met.

"Because it has been charged in the past that vocational schools do not turn out young men manufacturers are anxious to employ, an endeavor was made to ascertain the attitude of Detroit employers toward Cass students employed by them. The responses have been almost entirely favorable, though occasionally guarded; the personal ability of the student enters into the equation. Several employers want more of the same kind of help; one firm is sending its fourth class of fifteen to continuation classes. Pleas are being made for more courses; even the labor unions, sometimes hostile to industrial training, indorse the "Cass Tech."

ASSOCIATION ACTIVITIES

AUDIT OF THE TREASURER'S BOOKS APPROVED— OUR ASSOCIATION TO BE REPRESENTED ON THE PROGRAM AT MASTER MECHANICS' AN- NUAL CONVENTION—PLANS BEING PERFECTED FOR FORMING LOCAL CLUBS OF MEMBERS OF OUR ASSOCIATION

President McLeod presided at the meeting of the Executive Committee in New York on May 2d and there was an excellent attendance on the part of other officers and members of the committee.

The Assistant Treasurer presented an audit made by Mr. M. T. Chernock under the supervision of the Auditing Committee appointed by the Executive Committee. The audit was approved and upon motion ordered presented to the fourth annual convention of our Association.

The 1916 dues of certain Class "C" members which remain unpaid were brought to the attention of the Executive Committee in accordance with the provisions of the Constitution. Vice-President Tily moved that the names of the Class "C" members, whose dues are unpaid, be held over until the next meeting of the Executive Committee and that the Executive Secretary be instructed to again notify these members giving them opportunity to pay their dues before final action is taken by the Executive Committee.

Mr. Jacob H. Yoder, Chairman of the sub-committee appointed at the April meeting of the Executive Committee to report on the advisability of our Association making an educational exhibit at the annual conventions of the Master Carbuilders' Association and the Master Mechanics' Association, to be held in Atlantic City in June, reported. After discussion it was moved and seconded that the sub-committee be empowered to arrange for a speaker, a member of our Association, to address the Master Mechanics' Annual Convention, setting forth the advantages of membership in our Association. Mr. F. W. Thomas of the Santa Fe Railroad will make the address. The committee was further empowered to arrange for discussion from the floor and printed matter if necessary.

Vice-President Tipper, Chairman of the Committee on Codi-

fication, submitted, through the Executive Secretary, a preliminary report to the Executive Committee.

Upon motion of Vice-President Tily, the Executive Committee passed the following resolution: That article IV, Section 3, of the proposed amended Constitution be amended to read:

"The Executive Committee shall consist of a President, First and Second Vice-Presidents and nine members, at least six of whom shall be elected from Class "A" and the balance may be from Class "B"; also the retiring President shall automatically serve as a member on the Executive Committee for a period of one year after the expiration of his term of office as President.

President McLeod reported for the Local Convention Committee, which report was unanimously adopted.

President McLeod asked for an informal discussion regarding a plan for forming local clubs, to consist of members of our Association, in various cities and to co-operate with representatives of other educational associations and others interested in the subject of better and broader education. An interesting discussion followed and it is probable that the plan will be worked out in Pittsburgh, Philadelphia and New York where local sections will be formed. It is expected the movement will then spread to all cities where there is sufficient membership in our Association to justify a local section.

Public Libraries and Universities Keep in Touch with the Work of Our Association

The following is a list of Public Libraries and Universities that has purchased bound volumes of Proceedings of the Annual Conventions of our Association since the last report made in the April BULLETIN:

Evansville Public Library—Evansville, Ind.

University of Washington Library—Seattle, Wash.

We now have a total of thirty-four public libraries and forty universities.

EDUCATION IS A CEASELESS COMPROMISE

"The aim of 'Science' is to attain conceptions so adequate and exact that we shall never need to change them. There is an everlasting struggle in every mind between the tendency to keep unchanged, and the tendency to renovate, its ideas. Our education is a ceaseless compromise between the conservative and the progressive factors."—William James.

EDUCATIONAL COURSES OF TIDE WATER OIL COMPANY

How This Progressive Company Solved the Problem of Training Without Imposing Undue Burdens Upon its Employees

BY B. D. BENSON,
Assistant Treasurer

The Tide Water Oil Company, 11 Broadway, New York City, Manufacturers of Petroleum Products, is one of a large number of progressive organizations who believe that an educational program for its employees is conducive of greater efficiency.

The problem that confronted the company was to provide an educational program of sufficient elasticity so that it would not impose undue burdens upon those employees who desired to take advantage of its educational opportunities.

After careful consideration by the officials of the company it was decided to establish, at its plant in Bayonne, a class in which those employees who desired it could secure a good working knowledge of the basic subjects of Accountancy; i. e., Economics, Theory of Accounts and Practical Accounting.

A competent instructor was engaged and a year ago a class was organized with an initial enrollment of twenty-four.

The subjects of Applied Economics, Theory of Accounts and Practical Accounting were not taught separately, but as co-ordinated subjects. Briefly the scope of the course is as follows: The course is divided into Semesters each Semester consisting of seventeen weeks—two hours each week. The first hour was devoted to an oral lecture by the instructor upon a text lecture which had previously been supplied to the student and which he was supposed to study at home; the second hour of the session was devoted to practical work, propositions adapted from actual business being elucidated by blackboard demonstrations.

To reinforce the class-room work and furthermore in order to obtain some definite data of each student, the men were required to return the text lecture which had been supplied to them, when they had mastered it, and to secure a quizzer on the same. The quizzer consisted of three questions on Theory of Accounts and a Practical Proposition, the proposition being specially designed to test the ability of the student to apply his theory and also to develop his reasoning faculties.

The answers to the quizzers were submitted in writing on paper of uniform size furnished by the company, and in addition each student was supplied with grading slips, upon which provision was made for the student's name, number of lecture turned in, and instructor's grades. Three grades were established, Excellent, Good and Satisfactory.

When the answer papers were returned by the students they were carefully graded by the instructor, not only as to technique, but also as to correct expression, punctuation, etc. If in the judgment of the instructor the paper submitted was entitled to a grade of Satisfactory or better, he indicated the grade on the grading slip and the paper was returned to the student, together with a technically correct copy of the proposition.

Course Divided Into Four Semesters

The course comprises four Semesters in all. The first Semester commences with the fundamental definition of wealth, gradually leading up to debit and credit distinctions, use of accounts, fundamental distinctions as between real and nominal accounts, etc.

In developing the basic books of account, the start is made with the Journal and Ledger. By gradual processes the student is taught that all books of original entry are but some form of Journal and by this means they become familiar with Cash Books, Purchase Books, Sales Books, Voucher Registers, etc. In the development of the ledger it is shown, that in its constructive development two methods may be used, the addition of columns, and posting by totals. This affords an opportunity to explain the controlling account principle, which is easily grasped owing to the work which has gone before.

The second Semester covers the important work of Auditing and Constructive Accounting. The work on Auditing embraces the important details in the audit of the asset cash, detection of errors consisting of errors of principle, errors of technique, errors of omission, of commission and legal errors. The constructive work is a continuation of the work done in the first Semester. The construction of records, both original and ledger records is explained and amplified, the construction of statements, forms and procedures is discussed in such detail as to enable the student to secure a comprehensive grasp of this important branch of accounting.

Semester number three has to do with the important subject of the corporate form of organization. The steps preliminary

to the inception of a corporation are covered fully, advantages of this form of organization are presented, methods of financing are discussed, and the subjects of stocks, bonds, syndicates, amortization, etc., are given sufficient prominence.

The foregoing three Semesters furnishes the broad foundation for the fourth. The fourth Semester deals with the Accounting Procedures of the company itself. In this work the actual forms and statements in use by the company are used, their purpose explained in detail and an earnest endeavor is made to show clearly to each man just what relation the work of his own department bears to the work of the organization as a whole.

The men have shown the keenest interest in the work and the results obtained have been amply sufficient to justify the expenditure involved.

The students in the above course were charged a nominal amount, the company paying the major portion of the expense, and as an incentive to these students, an offer was made that any student making an average of 75 per cent. or better, the company would refund his entire fee to him.

The course is conducted Saturday afternoons from one to three on the men's time.

RHODE ISLAND'S REVISED EDUCATIONAL PROGRAM

Rhode Island is one of the latest states to undertake a revision of her educational laws. Four bills are pending in the General Assembly. The purpose of the new legislation is to provide continuation schools for children employed in factories. The ultimate object of the measure is to restrict illiteracy in that state.

The first bill provides for an extension of the annual school census and extends the age limit from 15 to 18 years of age. The second bill extends the period of compulsory school attendance from 15 to 16 years, except children who are regularly employed and have completed the grammar school grades may leave school at 14.

The third bill proposes an extension of the age and employment feature of the factory inspection law to include within its provisions children from 15 to 18 years of age.

The fourth bill proposes state aid for continuing schools whenever any town shall see fit to establish schools of this type for children employed in factories, manufacturing and business establishments.

**APPRENTICE SYSTEMS WESTINGHOUSE AIR BRAKE
COMPANY**

**Description of the Educational Activities Carried on by
this Company on Behalf of its Employees**

BY C. H. SMITH,
Assistant to the General Manager

The Westinghouse Air Brake Company has two systems of regularly indentured apprentices. In the first system there are two classes of apprentices, namely, apprenticed machinists and apprenticed pattern makers, each of which are indentured for a period of four years. In the second class, or special course in mechanics, the apprentices are indentured for a term of three years. There is another class of special apprentices who are graduates of approved technical schools, and whose apprenticeship course covers a period of two years.

The first-class, or regularly indentured apprentices, are required to be at least sixteen years of age, and of good reputation and physically suited to follow the trade. All applicants are requested to present themselves for personal interview. If his general appearance is favorable and he appears to have an aptitude for mechanical work, he is required to take an examination in Advance Arithmetic, English, Composition and Spelling, and Algebra through factoring, and must have a mark of at least 70 per cent. efficiency in each study. Accuracy is one of the essential requirements in these examinations. For instance, if the applicant solves a problem, the solution must be correct in both principle and result to receive credit. In other words, if an error in multiplication is made, the applicant receives no credit whatever for the solution of that particular problem.

In addition to these examinations, inquiry is made of the principal of the school from which the candidate comes as to his efficiency and general behavior, also as to how the candidate spends his evenings.

If successful in the above examinations, he is asked to fill out an application blank which afterwards must be signed by either the parent or the guardian. If the application is accepted, he is indentured for class work after which arrangements are made for him to commence work. The indentured forms are made out in duplicate, one copy for the parent or guardian of the apprentice, and the other for the record and file of the West-

inghouse Air Brake Company. As stated in the indenture, the first three months of service are considered as a probationary period, the continuation of the apprenticeship depending upon the progress of the apprentice in shop and school. The wages are based upon an hourly rate which is as follows:

The first six months, $7\frac{1}{2}$ cents per hour; the second six months, $9\frac{1}{2}$ cents per hour; the third six months, $10\frac{1}{2}$ cents per hour; the fourth six months, $11\frac{1}{2}$ cents per hour; the fifth six month, $14\frac{1}{2}$ cents per hour; the sixth six months, $15\frac{1}{2}$ cents per hour; the seventh six months, $18\frac{1}{2}$ cents per hour; the eighth six months, 21 cents per hour. In addition to these wages, the apprentice receives bonuses as follows, provided his shop and class work records are 60 per cent. or above: First year, \$25; second year, \$40; third year, \$75; fourth year, \$100; or a total of \$240 in bonuses for the four years.

Keeping in Touch with the Work

Reports showing the number of hours worked and the class of work performed, also showing the shop progress of the apprentices (signed by the Department Foreman, afterwards signed by the apprentices themselves), are made out on a special form and forwarded the first of the following month to the General Superintendent for approval, after which they are entered upon the office records. This arrangement requires the apprentice to sign his own record and no records are made concerning any apprentice which are not read and signed by the apprentice. Every month a statement is forwarded to the parent or guardian of the apprentice showing the averages attained by the young man in his studies at the apprentice school, which is conducted by the Educational Director of the Wilmerding Young Men's Christian Association, assisted by an engineer from the Engineering Department of the Westinghouse Air Brake Company; also at the end of each quarter a report is mailed showing the school average for the three months and also the progress of the apprentice in the shop.

In the shop, the apprentices are under the care of the supervisor of apprentices; also under the foreman of the department in which the young man may be working, but the foreman of apprentices has general supervision of all the apprentices, and if they have difficulties to overcome, they feel free to go to him for help and instruction. Thus there is some one in charge of the apprentices who is responsible for the advancement of the ap-

prentices and to see that they receive the proper kind of shop training which finally results in efficient workmen.

The machinist apprentice work in the shop is apportioned approximately as follows: You will also note a change in their rate per hour; also change of rate for second- and third-class apprentices.

Months	Hours	
4 or	450	.....Drill Press.
9 or	2,025	.....Lathe.
1 or	225	.....Shaper.
4 or	450	.....Planer.
12 or	2,700	.....Bench.
3 or	675	.....Boring Mill.
9 or	2,025	.....Milling Machine.
6 or	1,350	.....Drawing Room.
4 or	900	.....Test Department.
Total.....		10,800

Apprentice Schedule "A"

FOR THE TRADE OF "PATTERN MAKING"

YEARS	Rate per Hour	Approx. No. of Months	No. of hours Required	Class of Work	Cash
1st	7½c....	6	1350	Sand papering, Varnishing and Plain turning.	\$25
	9½c....	6	1350	Plain Bench Work.	
2nd	10½c....	6	1350	Mechanical drawing, Engineering Office.	\$40
	11½c....	6	1350	Helping Moulder and Core-making (Iron Foundry).	
3rd	14½c....	6	1350	Pattern Shop; Advanced Work.	\$75
	16½c....	6	1350	Pattern Shop; Advanced Work.	
4th	18½c....	6	1350	Pattern Shop; Advanced Work.	\$100
	21c.....	6	1350	Pattern Shop; Advanced Work.	
Totals	....	48	10,800		\$240

The Westinghouse Air Brake Company, recognizing the

importance of the apprentices advancing as far as possible in their school work, instituted a day school educational department, in connection with the apprentice system which has been in force since September, 1906, with very satisfactory results. The school work is conducted, as before stated, in the Wilmerding Young Men's Christian Association, and amounts to approximately eight hours per week for each apprentice running nine months of each year of the four years (September to July).

The regular shop hourly rate is allowed while attending school. The class work is outlined in the following schedule, of which the figures represent the number of hours in recitation per week:

FIRST YEAR:

- 1 Well's Academic Arithmetic,
- 1 Wood's Practical Grammar & Composition,
- 2 Well's Essentials of Algebra,
- 2½ Anthony's Mechanical Drawing.

SECOND YEAR:

- 2 Well's Essentials of Algebra,
- 1 Slide Rule,
- 2 Gordon's High School Course in Physics,
- 2½ Anthony's Mechanical Drawing.

THIRD YEAR:

- 2 Well's Essentials of Algebra,
- 2 Well's New Plane and Solid Geometry,
- 2 Holton's Shop Mathematics,
- 2½ Machine Design.

FOURTH YEAR:

- 2 Well's New Plane and Solid Geometry,
- 2 Halstead's Metrical Geometry,
- 2 Well's New Plane and Spherical Trigonometry,
- 2½ Machine Design.

One interesting feature in connection with the class work is that these classes are conducted the first hours in the morning so that the apprentice who has class work will come into the class before he goes into the shop for the day. This results in better recitations and more thorough study.

Monthly reports of the progress of each apprentice are filled out by the Instructors and sent to the General Superintendent

for his information and approval and afterwards entered upon the records in the office of the foreman of apprentices.

Apprentices, in order to continue their apprenticeship, are required to have an average mark of sixty per cent. efficiency in the school examinations, their progress in shop work must be favorable and their shop department and general habits must be satisfactory.

Upon satisfactorily completing the terms of the indenture, the apprentice is given a diploma properly filled out, signed by the officers of the Westinghouse Air Brake Company, designated, and the company seal attached to the diploma.

The Second Class, or Special Course in Mechanics

The requirements for admission to this class are similar to those for the first class, except the applicant must have had at least two years' general machine shop experience and must pass satisfactory written examinations in all the studies covered in the school work of the first class of apprentices. The first-class apprentices are also eligible to indenture in the second class upon the completion of their regular indenture.

The shop work of this class consists of the following:

First—Iron foundry, 4 months; bench work and floor molding, charging and cupola practice.

Second—Iron foundry, core room, general work, $1\frac{1}{2}$ months.

Third—Brass foundry, general work, $1\frac{1}{2}$ months.

Fourth—Pattern shop, general work, 1 month; turning and other machine work, 1 month; bench work on patterns with core box, 3 months; metal pattern work, 1 month.

Fifth—Blacksmith shop, helping toolsmith, general forging under instruction, 4 months.

Sixth—Chemical laboratory, 6 months.

Seventh—Drawing room, 6 months.

Eighth—Physical laboratory, 7 months.

The following schedule shows the school work required of this class of apprentices, the figures denoting the number of hours in recitation per week:

FIRST YEAR:

- 2 Clark & Dennis's Elementary Chemistry,
- 2 Candy's Analytic Geometry,
- 2 Osborne's Differential and Integral Calculus.

SECOND YEAR:

- 2 Osborne's Differential and Integral Calculus,

- 2 Adam's Descriptive Geometry,
- 2 Merriman's Mechanics of Materials.

THIRD YEAR:

- 2 Merriman's Mechanics of Materials,
- 2 Hancock's Applied Mechanics,
- 2 Weisbach & Herrman's Mechanics of Air Machinery.

The wages received for this class of apprentices are as follows:

First nine months.....	18½c per hour
Second nine months.....	19½c per hour
Third nine months.....	21c per hour
Fourth nine months.....	23c per hour

The bonuses are allowed as follows:

	First Year	Second Year	Third Year
86% to 100%.....	\$50.00	\$75.00	\$100.00
81% to 85%.....	45.00	67.50	90.00
76% to 80%.....	40.00	60.00	80.00
71% to 75%.....	35.00	52.50	70.00
65% to 70%.....	30.00	45.00	60.00

All reports, etc., for the second class apprentices are made out and signed the same as for first-class apprentices.

Third Class or Special Apprentices

This course is outlined for graduates of Universities and Technical Schools and for the purpose of training a skilled force of engineers to draw from, to fill positions in the various branches of service. Apprentices are given an opportunity to familiarize themselves in a general way with the various manufacturing operations, and the general construction and working of the apparatus. The rate of wages is 26c. per hour for the first year and 30c. per hour for the second year. Due credit is given for all overtime work, the rate of pay being at 1½ the regular time.

Application for admittance as engineering apprentices must be made by letter to the company in the hand-writing of the applicant, stating date of birth, school education, and where received, name of University, course pursued, degree received, reference of professors or others, statement of practical experience, name and address of father, or of mother if father is deceased, or of guardian, and a recent photograph must accompany application.

Apprentices of this class are graduates of nearly every col-

lege and university in the country, including the following: University of Pittsburgh, University of California, University of Wisconsin, Syracuse University, Ohio State University, Purdue University, Sheffield Scientific School, Cornell University and Lehigh University.

Results Have Been Satisfactory

The results obtained from this system have been very satisfactory in every way and we have been able to train men along the lines specially required for our class of work. We have found that a fair percentage of apprentices develop into the type of men we require for foremen and assistant foremen. We aim to have on the roll at all times an average of 25 apprentices, which is about the maximum number we can take care of to advantage under normal business conditions.

The educational requirements necessary for an apprentice to enter the course have been the means of maintaining a higher standard of boys than we believe is generally found among apprentices. This may appear more or less of a hardship on the poor boy who has not been able to attend school a sufficient length of time to be able to pass the requirements. This, however, has in a number of cases been taken care of by giving boys employment in the shop and arranging for them to attend the Y. M. C. A. or some other night school and prepare in such branches of study as will enable them to pass the entrance examination for apprentices.

AGRICULTURAL AND VOCATIONAL TRAINING IN WASHINGTON

The Agricultural and Vocational Committee of the Washington State Bankers' Association, meeting in Spokane, recently, resolved itself into a court of investigation, with the educational leaders of the state as chief witnesses, in an effort to ascertain what they felt the bankers should do to stimulate community development in the rural districts.

W. S. Thornber, director of extension work of Washington State College, told of the necessity of activity on the part of the banker in building up the confidence of the farmer in the banker and business man. He urged the bankers to get outside the office more frequently.

Ira D. Cardiff, in charge of the experiment station of the State College, asked the co-operation of the bankers in emergency

cases, such as the fight against hog cholera and cattle tuberculosis.

T. J. Newhill, in charge of organization work for boys' and girls' clubs, asked that the bankers foster this movement.

The committee will draft recommendations to the state association based on the suggestions made and will submit these to H. C. Lucas, of North Yakima, president of the State Bankers' Association.

HOW INDUSTRIAL EDUCATION MAY BE EFFICIENTLY GIVEN

Prof. F. G. Bouser, of the Columbia University Teachers' College, in an Address before the Eastern Arts Association at Springfield, Mass., Defined Industrial Education

In its most comprehensive form, the problem of industrial education includes three phases:

1. That study of industry which will prepare for the intelligent selection and use of industrial commodities.
2. That study of industry and industrial conditions which will prepare for intelligent and appreciative citizenship as this is involved in attitudes toward industry and industrial workers which will help to safeguard the health, happiness, and civic efficiency of the workers as well as to guarantee efficient industrial productivity.
3. That study of industry and that training in productive processes and methods which make the skilled and efficient workman.

The tendency of to-day seems to justify the treatment of these problems in three divisions, namely: that of the elementary school period; that of the junior high school period; and that of the vocational school period. There are also certain overlapping phases of the work which may be considered as supplementary school courses for those who have begun wage-earning in industrial occupations but whose education and training should be continued.

In the elementary school, our problem in the study of the industries is to develop intelligence, insight, appreciations and attitudes making for efficiency as consumers and citizens; to develop general dexterity and capacity for motor expression; and to provide opportunity for children to reveal, discover, and

develop their potential capacities as a basis for vocational selection.

In the junior high school period, the industrial arts work may be a continuation of that of the elementary period, but each industry included may be treated much more intensively. Boys and girls will tend to differentiate, boys taking little interest in industries very largely conducted by women, the girls inclining away from industries using the home refractory materials.

Those who will enter industrial vocations at the close of the junior high school period, at the age of 15 or 16 years, are ready, in most cases, to begin the specific vocational training in their selected field. The work, therefore, of the remaining three years of the secondary period should be divided between general education and shop work in the selected field of industry. This shop work should occupy at least half of the time and, as nearly as possible, be that of the commercially productive type. The best organization of work so far developed, all things considered, seems to be the co-operative plan where this is possible. If half of the student's time is devoted to a well organized and supervised sequence of shop work in a productive plant, and the co-ordination of shop work and supplementary school work is close and vital, both the education and training of the boy at the close of the secondary period, at 18 or 19 years of age, will find him well on the way to journeyman's standing in the vocation.

STATE COLLEGE TO HAVE TRADE COURSE

Secretaries of Chambers of Commerce throughout Pennsylvania will study factory organization, cost accounting and scientific management at a summer course established at the State College. Prof. Hugo Diemer, head of the Department of Industrial Engineering, will be in charge. Co-operating with him is the Pennsylvania Commercial Secretaries' Association, through their secretary, Charles M. Ketchum, of Washington, Pa.

According to Mr. Ketchum, members are enthusiastic over the idea of having a series of lectures and discussions on such subjects as industrial psychology, industrial education and industrial organization. Methods and systems of promoting commercial organization activities will be discussed by experts. It is probable the course will be given from August 21 to 26.

UNUSUAL EDUCATIONAL DEVELOPMENTS

Items Gathered from Many Communities Showing Steady Progress in Broader Training for American Youths

The *Des Moines, Iowa, Register*, calls attention to changing sentiment educationally of that city. Four hundred thousand dollars in bonds were required to "correct mistakes of early day school construction." If Des Moines did not have a single school building to-day, and the school board were to plan its system of schools from the beginning, "it would be possible to get along with fifteen fewer buildings than we have to-day."

A. L. Clinite, Secretary of the Board of Education, is reported as having said "the new educational plans provide adequately for prevocational training and other forms of industrial education."

Industrial School Boys Would Train

The boys of the Lathrop Industrial School, of Kansas City, Mo., want to go ahead with their military drilling immediately. Two of the instructors on the faculty have had military training and are quite able to train the boys. The lads themselves are willing to turn out on their machines the wooden guns to drill with and are on the qui vive to be allowed to form the Lathrop brigade.

Boys to Build a Schoolhouse

"Boys in the carpentry division of the manual training department of the Fort Wayne, Indiana, High School will build the portable schoolhouse needed by the School Board, making the outside purchase of the structure unnecessary. This is but one of many concrete instances in which the manual training work is being turned to practical account while it is giving the student a very definite educational equipment that will be of immense service to him. Not all the lads in this division will finally become carpenters. Indeed, it is possible that none of them may elect to follow that calling. The thing of real value in the vocational work is that it inspires the actual doing of things instead of giving a merely theoretical knowledge of their accomplishment," says the *Fort Wayne Sentinel*.

A Modern School Plant

A good idea of changing opinion as to what a modern school

plant should be is obtained from a description of the Mark Twain School recently opened in Kansas City, Missouri.

There are fourteen classrooms grouped about a large auditorium and each opening on the school grounds. The auditorium will seat 800 persons. In addition to the class rooms, there are a model apartment for domestic science classes, a play room, a kindergarten, a gymnasium, a teachers' rest room, a dispensary for school physicians, a manual training shop and a double branch library room.

Outside are a school garden, a macadamized playground, a basketball court and a track.

Two large fresh air class rooms have been provided for children in ill health.

Pennsylvania Dairies Train Their Workers

The dairy manufacture course as comprehended in the winter short courses in agriculture and home economics at the Pennsylvania State College and in which 25 students, 23 men and 2 women, representing four states, are enrolled this year, is intended to fit the student as a creamery butter-maker or to equip him for practical work in the cheese factory.

Unlike some of the other options in the winter courses, that in dairy manufacture is prescribed and requires all the time of the student, rendering the election of additional subjects impossible.

There is a good demand for men trained in this line of work and already a number of the students taking the course have either secured positions or have good prospects. For trained and experienced men salaries ranging from \$70 to \$100 a month are not uncommon. Some of these positions involve managerial work in cheese factories, creameries and ice cream plants.

Preparing for Educational Advancement

Frank F. Frederick, Director of the School of Industrial Arts of Trenton, New Jersey, in a recent talk at a round table of citizens interested in better education, discussed the educational needs of New Jersey's capital city.

The attitude of the men employed in the trades and the industries has changed recently. They now know that technical education is necessary. They have made such demands upon those in authority in many cities, especially in New England, that technical education along practical lines has had to be provided.

This demand is on the way to Trenton, and as President Mueller, of the Board of Education, says, "It is coming and when it comes it will come like an avalanche."

Is it not wise to prepare for the future when it is known what the future will bring forth?

The school must some day have a woman's building in which instruction in cooking, dressmaking, millinery, nursing, etc., will be offered, and a technical or shop building for the men, in which machine shop practice, electric construction, plumbing, automobile repairing, etc., and certain phases of ceramic work, not now offered by the school, will be offered. The first need is the technical building, and the city has been asked to purchase land near the school upon which a building could some day be placed.

Demand More Advanced Educational Programs

Newark, N. J., newspapers quote their delegates who attended the recent educational convention of the Department of Superintendents of the National Educational Association, held in Detroit, as having found the convention a disappointment. Modern educators are no longer content to discuss merely academic courses, but have fixed their eyes on the possibilities of the future.

"If you ask me what new thing I brought from the meeting, I should have to answer, none," declared Dr. Maxson, Superintendent of Schools of Plainfield. "All the topics discussed were familiar subjects. But there was, perhaps, a new emphasis in the prominence given to rural education.

"The improvement of rural education is in itself no new idea. A dozen years ago some of us sounded the note that there was necessity for a great revival of education in the rural schools. The importance of the country school is indicated by the fact that probably four-fifths of you were born on the farm or in small villages.

"But for the last generation the cities have been draining the country of its best product, and the vacant places have been partially filled by a lower grade of people. Good roads, country 'phones, automobiles and rural delivery are changing the outlook and preparing the foundation on which we can recreate the country as the fountain source of strong life and virile thought, on which the future of the country may rest.

"The modern revival of learning, as expressed by discussion, contemplates the consolidation of the small rural schools

into a central school, which shall vie with the city in its completeness of equipment and its attractiveness."

In voicing his opinion Dr. Corson, First Assistant Superintendent of the Newark Schools, said: "The convention did not measure up to an epoch-making session. No new notes were struck. There was an undertone that expressed dissatisfaction."

Mr. Sexton, Assistant Superintendent of Newark Schools, practically voiced the same opinion. He said the convention did not "hit many high places and high-water marks." Mr. Sexton emphasized the results being obtained in the educational school now in operation at the automobile plant of Henry Ford.

Bringing Education and Business Together

Howard Elliott, president of the New Haven Railroad; Thomas W. Lamont, of the firm of J. P. Morgan & Co.; Henry S. Dennison, treasurer of the Dennison Manufacturing Company, and H. B. Gill, of F. W. Norris & Company, Cambridge, addressed the students of Harvard at a meeting held under the auspices of the Harvard School of Business Administration recently. This meeting was open to all members of the university and is one of a series being held to acquaint the prospective graduate with the vocations he may consider choosing when leaving college. The speakers discussed the work of the Harvard Business School in fitting the college man for a business career. Theodore N. Vail, president of the American Telephone Company, has also been asked to speak.

Getting Practical Business Experience

A model store conducted on modern lines and arranged to give practical lessons in housekeeping and business, in so far as buying and selling groceries is concerned, is among the successful features at the Drexel School, of Philadelphia. The students run the establishment under the direction of their instructors, and learn their first lessons in business methods. Thus, it is claimed, they are better prepared to meet tradesmen, when sent to stores to make purchases for their parents.

Learning How to Shop

How to dicker with produce retailers, how to select table delicacies with an eye to economy, how to choose varieties of

foodstuffs and how to please the family diners in general are some of the things taught by Mrs. Nevada Davis Hitchcock to her marketing class of Temple University students in Philadelphia. The class is conducted in the Reading Terminal Market and is probably the first of its kind ever established.

The young women, numbering 40, hurried from the University at Broad and Berks Street, each armed with a morning newspaper, which proved very valuable as the afternoon progressed, and plunged into the market 20 minutes later. Directly to a butcher's stall they went, and surrounded Mrs. Hitchcock as she started her instruction.

The good-natured butcher uttered no word of protest as the instructor fingered his wares, first holding aloft a flank steak, then a loin of lamb, and other cuts of the various animals as she told their particular advantages and shortcomings.

Tennessee Wants Broader Education

Every member of the Tennessee delegation in Congress has expressed an intention to support the Smith-Hughes vocational educational bill providing national grants of money to the states for the purpose of stimulating vocational education in agriculture and in trades and industries.

Bringing School Children Into Industrial Life

On a recent afternoon 500 high school boys and girls entered the business life of Cincinnati. They went on 'Change and took their first lesson in real business as members of the Civic and Vocational League of the Cincinnati High Schools. President W. B. Melish, of the Chamber of Commerce, presided, just the same as if it were a meeting of Cincinnati merchants. He explained that 'Change was a place where business men met for an hour each day, exchanged ideas about prices and arranged deals. Other speakers were E. L. Sternberger, prominent Cincinnati business man, who is chairman of the meeting, and Roland W. Guss, who has charge of the public school gardening in Cincinnati. The first business the league will transact will be to make a census of all the vacant lots in the city suitable for gardens and report at the next meeting.

Women Believe in Preparedness for Peaceful Life

About four hundred women assembled recently at the Home Club in Washington where, under the auspices of the House-

keepers' Alliance, they discussed ways and means of devising a system of economy in housekeeping, which will in the end revert to the benefit of the nation.

Many speakers advanced reasons for the necessity of educating the children in public schools along the lines of domestic science, in the hope that the cook of the future will be a woman of training commensurate with her calling. As one of the speakers asserted, "liberal education is indispensable to good citizenship, and in that connection we ought to educate the cook of the future."

During the meeting "Articles of Faith" were adopted, which were in part to the effect: That it is better to spend a penny on household labor-saving devices than to work the housewife to death and pay \$150 for a funeral; belief in the preparedness of the American people and that the place for women to begin is in the home; belief that the men who produce the money and the women who spend it working to make homes should unite for a better understanding and the wiser conduct of the whole matter of economy in order that the American people may thus their preparedness insure.

As an incentive to the school children to better prepare themselves for a domestic career, scholarships will be provided, in educational institutions with national reputations. Prizes of savings accounts will be given to children for proficiency in bread making, as well as for excellence in devising a household budget for a typical family.

SCHOOL GIRLS AND VOCATIONS

(Philadelphia Enquirer).

Out in Chicago they are going about the business of providing vocations for young people in a practical western manner. The high school authorities have communicated with the department stores and large stores generally and suggested that there be co-operation in the matter of training the pupils for salesgirls. One large store has agreed to pay high school girls who will work on Saturdays and other special days. If their services prove satisfactory they are to be given permanent employment at graduation at a salary that is to be mutually satisfactory. These girls are to receive "special attention and training in the store and will be given an opportunity to advance as rapidly as their skill and attainments will warrant."

The question of vocational education has been assuming importance for several years, and if it can be placed upon a practical basis is sure to be a good thing for both girls and boys. One of the complaints made about the public schools has been that thousands of children have been turned out each year without any definite aim in life. This is an age of specialization. In order to meet with any degree of success it is necessary to have knowledge about some particular business or profession, and the boy or girl who is without this knowledge—no matter what it may be—is seriously handicapped in the battle of life.

The plan for schools of salesmanship is a practical and important experiment and promises one way of solving the vocational problem.

OLD FOGYISM

"Most of us grow more and more enslaved to the stock conceptions with which we have once become familiar, and less and less capable of assimilating impressions in any but the old ways. Old fogyism, in short, is the inevitable terminus to which life sweeps us on. Objects which violate our established habits of 'apperception' are simply not taken account of at all; or, if on some occasion we are forced by dint of argument to admit their existence, twenty-four hours later the admission is as if it were not, and every trace of the unassimilable truth has vanished from our thought. Genius, in truth, means little more than the faculty of perceiving in an unhabitual way."—William James.

FIRST FOREIGN TRADE SCHOOL STARTS SESSIONS

The first foreign trade school in America was opened in New York City on April 15th. It is a private enterprise, but is supported by the United States government, many great corporations engaged in selling American goods abroad and several important commercial bodies.

The Business Training Corporation, which is conducting the school, has offices at 185 Madison Avenue, and charges each student the modest sum of \$24. The director of the school is Edward E. Pratt, Chief of the Bureau of Foreign and Domestic Commerce of the federal government, and the president is William H. Lough, former special agent of the bureau.

The course offered will include lectures and readings in the

economics of world trade, the worlds markets, export policies, export houses, direct exporting, export salesmanship, shipping financing, export technique, foreign and home law, importing and trade building.

Among those active in the project are Edward L. Baecher, of the Standard Oil Company, of New York; E. A. de Lima, president of the Battery Park National Bank; J. F. Fowler, vice-president of W. R. Grace & Co., Grover G. Huebner and Emory R. Johnson, of the University of Pennsylvania; E. C. Porter, secretary of the American Russian Chamber of Commerce; J. Santilhano, of the Guaranty Trust Company; C. A. Richards, of Bowring & Co., and Edward Neville Vose, of Dun's.

NEW MEMBERS

Since the last membership statement appeared in the BULLETIN, the following new members have been received:

Class "A"

Ford Motor Company, Detroit, Mich.—Mr. N. A. Hawkins.
Standard Oil Company of California, San Francisco, Cal.—Mr. R. C. Warner.

Class "B"

Mr. A. L. Heinemann—Pennsylvania Railroad Company—Altoona, Pa.
Mr. E. W. Hughes—Pennsylvania Railroad Company, Philadelphia, Pa.

Class "C"

Mr. Samuel MacClintock, Secretary La Salle Extension University, Chicago, Ill.

BULLETINS OF THE UNITED STATES BUREAU OF EDUCATION

Recent Bulletins issued by the United States Bureau of Education:

"Monthly Record of Current Educational Publications," compiled by the library division of the Bureau of Education, April and May, 1916.

Copies of these Bulletins may be procured from the Superintendent of Documents, Government Printing Office, Washington, D. C., at five cents per copy.

NATION-WIDE BODY TO AID AGRICULTURE

James Wilson, Member of Three Cabinets, Heads New Organization; T. N. Vail, Vice-President

The organization of the National Agricultural Society to improve agricultural conditions throughout the country was completed recently at a meeting of prominent men in the Hotel Biltmore, New York.

James Wilson, who was Secretary of Agriculture in the Cabinets of Presidents McKinley, Roosevelt and Taft, was elected President, and Theodore N. Vail, President of the American Telephone and Telegraph Company, was chosen as Vice-president. Mr. Vail is largely interested in agriculture, having founded an agricultural school for boys on his farm in Vermont, which he recently turned over to the state.

Strong Advisory Board Planned

The society will have in addition to the officers a strong advisory board composed of the deans of some of the leading agricultural colleges, heads of agricultural experiment stations, Department of Agriculture men, leading editors of agricultural papers, and others. Permanent headquarters for the society eventually will be established at Washington, D. C. At present, offices have been taken at 2 West Forty-fifth Street, New York City, and from this point the work of organization will be directed.

It is felt by those responsible for the founding of the National Agricultural Society that there should be in this country a national organization to which the farmers could look for help and guidance and which would be their mouthpiece in agricultural matters of national concern.

In discussing the plans of the society, President James Wilson said:

Object is to Produce More With Less Effort

"Advanced education, improvement in living conditions and environment of all classes is necessitating larger incomes to those who are dependent directly or indirectly upon the returns for their labor. Where labor is employed on wage basis, the necessary increase in wages must be provided for by improvement in the productive capacity of labor. Avoidance of waste effort and

waste material, by intelligent and improved direction, will enable more to be produced with the same or less effort. By improving production and removing all unnecessary or oppressive burdens, the prices of commodities need not be unnecessarily or oppressively increased, and wages can be put and maintained on a proper basis. There is a multitude of more or less dissociated attempts to do more or less in these directions. To become effective, all these efforts must be co-ordinated and supplemented to each other.

"Agriculture is the greatest productive industry, the fundamental industry, and practically the industry upon which all other industries and all commerce and movement are based. Great advances have been made in this primary industry, which in many sections have been effective, but the great mass of agricultural production is as yet unmoved. The new generation in that field is anxious to get the best and latest. The society will seek to co-ordinate all that is being done and bring it closer to the individual, and make these wonderful advances in methods as effective on the small farm and the small home units as they have been made on the larger units. It is the intention to bring the best of all to the attention of each individual or farm unit."

- VOCATIONAL TRAINING IN CONNECTICUT

The state superintendent of public instruction of Connecticut has pointed out that there are 80,000 boys and girls in that state over 14 years of age, and that there are only 16,000 of these in the various schools of the state. This leaves about 64,000 children getting no more than a grammar school education. He is using these figures to argue for the establishment of trade schools, which will reduce these figures. Comparing the trade school with the high school, he says: "It gives them a better start in life, as a boy without some special training is at a disadvantage."

Commenting on this manual training and vocational education, he says: "The trade school certainly gives a better start. Whether it gives a better finish has often been doubted; but the big fact remains that the trade school catches hundreds who would never go to a high school, and gives them what is essentially an equivalent education, and for them a better education. - We need more of the type of vocational school which Superintendent Hine has in mind."

PRINTERS' APPRENTICE SCHOOL A SUCCESS

700 in Attendance—Employers and Unions Contribute to Support of Unique Institution

The school for printers' apprentices of New York, which has no counterpart, now has 700 apprentices in attendance.

The employing printers of the city and the printers' unions are jointly represented on its board of managers, and the \$2,000 annual appropriation by the employing printers has been matched by an equal amount voted without a dissenting voice in union organizations having 7,000 members.

The school is conducted by Superintendent A. L. Blue at the Hudson Guild, on the west side, which gives \$1,000 a year and free rent. It has been equipped with a \$6,000 model composing room through the generosity of interested business men.

Increase in Efficiency

Charles Francis, founder of the Printers' League and member of the school's board of managers, says "the employing printers are gratified with the results at Hudson Guild, where the most practical methods known in teaching any trade have been evolved and the relations that exist between employers and employes have been strengthened." He adds:

"The tendency in commercial and industrial life is to specialize, and the boy who goes into a New York printing office is very likely to be kept at the special task for which he shows his usefulness. As a result, the large printing offices are creating specialists and the country offices are about the only place where people still learn the trade.

"Since the printers' school has become successful, there has been a noticeable increase in efficiency, and the spirit of co-operation has improved."

Employers and Unions Approve

Leaders in the printers' unions say they are fully satisfied that the plan worked out can be extended to all the larger cities, and that through it they will be able to overcome their greatest difficulty in meeting the demands of employers for more efficient help.

Employing printers take the same view, not only giving

active, moral and financial support, but sending some of their apprentices to day sessions each week without reduction being made in their pay. Many boys attend the night school two or three evenings a week.

The school accepts only boys who have had at least two years' actual experience at the trade, thereby eliminating all students who might not make practical use of the instruction they receive. A beginner in the classes at Hudson Guild with two years' experience at the printer's trade receives instructions necessary for his third year. In the same manner the school prepares him for the fourth and fifth years.

MAKE STUDY OF VOCATIONAL WORK

The committee on vocational training and guidance of the chamber of commerce, of Spokane, Wash., has organized an extensive program of study and research in connection with Spokane's school system. In the preliminary investigation authorized the committee will take up the following subjects:

What Spokane schools are doing in the way of vocational training and guidance, in the grade schools, the high schools, field and other schools.

What other cities of the United States are doing along these lines; the progress in foreign countries; the Wisconsin system of vocational education as now in practice; and the work of other states.

Pending legislation on vocational education—the Smith-Hughes bill.

Part time and continuation schools.

Schools surveys—Richmond, Minneapolis and Portland.

The co-operation of business people in vocational guidance and placement work of schools with the suggestion of a bureau to carry on this work.

The Gary plan—Gary, Indiana, and New York City; from a standpoint of vocational training and also from a standpoint of duplicate schools.

RURAL LIFE IS DECADENT

New England's rural life is decadent, according to the annual report of the Rockefeller General Education Board, and with a view to its restoration the board appropriated last year \$29,500 to initiate farm demonstrations under the auspices of the Maine

and New Hampshire State Agricultural Colleges. The board had previously promoted farm demonstrations in the South.

"Maine and New Hampshire," the report says, "have suffered severely in consequence of the rapid agricultural development of the Middle West and the building of the trunk lines. Among the occupations which, if intelligently carried on in this section, promise a satisfactory return are orcharding, dairying, market gardening, and poultry raising. The results already obtained show the wisdom of making the State College an active agent in improving agricultural and horticultural methods through the direct form of demonstration introduced by Dr. Knapp.

"The number of those participating is increasing rapidly and the experience of the Southern States in the matter of increased productivity and profits is being repeated."

SOUTH IS STRIVING TO IMPROVE SCHOOLS

Southern states are making earnest efforts to improve their schools, according to a section of the forthcoming annual report of the General Education Board issued recently.

The greatest progress has been made in high schools, many new ones being opened, and standards generally are raised in those already founded. There is considerable improvement in the negro schools also, it is asserted.

The report says:

"Despite differences in local conditions, necessitating more or less variety of effort in different states, the Southern States are consciously working toward a single goal—an adequately organized, financed, administered, supervised and manned State system of education.

"The negro rural schools of the South are showing perceptible improvement; state and county superintendents are taking increased interest in their development; the negroes themselves display commendable and growing concern; finally, the industrial teachers provided by the Jeanes fund and the agents supported by this board are adapting the education of the negro to his real needs."

SCRANTON'S NEW TECHNICAL SCHOOL

About fifty of the leading manual training schools in the United States will contribute their best points in the establishment of the Johnson institute, the manual training institution

which will be established in Scranton, Pa., under the terms of the will of O. E. Johnson, late coal operator and banker. People who have become restless under the quiet, unostentatious manner in which the institution is being slowly built will be pleased to know that the school promises to be a model of perfection when it is really thrown open to the public, says the *Scranton Times*.

During the past year the board of trustees established by the Johnson will has been quietly gathering information. Under the direction of Robert B. Keller, principal, who has already visited and made personal inspections of more than a score of schools, many important features which have proved successful in nearly all of the important manual training schools in this country were gathered and utilized in forming the foundation for making the Scranton school a success.

SCHOOL BUSINESS TRAINING

(Indianapolis News)

Several prominent colleges now include in their curricula courses in business theory and administration. One eastern college requires that the student taking a business course be a graduate of the arts school, thus raising business to the level of the professions. One hindrance to the teaching of commercial courses in high schools, it has been said, was the lack of competent commercial teachers. The colleges offered no training for such teachers.

The state universities of South Dakota, Montana, Illinois, California, Oregon, Nebraska and Minnesota now make special mention in their catalogs of courses especially designed for commercial teachers. Numerous privately endowed institutions do likewise. Perhaps the corporation schools conducted by employers for special instruction in such employers' business, which have sprung into being in the last few years, will always exist. Such schools usually emphasize instruction in details of a special business which would be of little value in another industry. But the public schools seem aroused at last to the importance of general training for business.

TRADE SCHOOL FOR GIRLS

Just when the nations at war by swift revolution of standards are thrusting women into untried ways our states and cities are

beginning to fit them for skilled service in broader fields by the slow process of evolution, says the *Washington Times*.

For a hundred years technical schools for boys have been in operation in Scotland and in England, in Germany and in France. Young men in these northern countries have been trained in them and then have found in America scope for their best powers. So long as these skilled workers came it was a canny bargain we Yankees made; but when men immigrated in hordes from countries where no scientific knowledge had been gained and no manual dexterity had been developed, educators saw the need of systematic training in arts and crafts. About twelve years ago the demand for vocational schools met an encouraging response. With Federal aid this response will be more effective.

While there are ten states which make annual grants to promote industrial intelligence, the cities of New York have been the most generous and most progressive in developing the type of school required by the manufacturing interests of the people. Girls as well as boys who had been considered dullards in brain work or irrepressibles in mischief-making showed unexpected powers of application when they saw how they could apply their theoretic knowledge to practical problems.

In each city the trend of progress has been in line with local needs and has deserved the support of the community.

The work of placing girls, of following up the graduates and getting better places for them when they have had experience is an absolutely new feature in a school supported by the public.

URGES EXTENSION OF INDUSTRIAL EDUCATION

At a recent meeting of the Boston school committee, Frank W. Thompson, assistant superintendent, outlined an extensive plan for the improvement and extension of industrial education in that city. He laid particular stress on the necessity of immediate extension of the "colony system" in various parts of Boston to relieve the pressure on the present industrial schools.

He also advocated strongly the extension of the trade co-operation courses in the high schools of the city, and had George W. Earle, headmaster of the Hyde Park high school, describe the success of such courses in his own school, where they have been tried for nearly three years. The cost of educating a pupil on the industrial co-operative plan, Mr. Earle explained, was about one-half as great as for educating a pupil to enter college.

Others who testified to the great value of trade courses and the necessity for expanding the facilities for such courses were Miss Edith L. Howes, of the Trade School for Girls; Charles Kroll, of the same school, and David Snedden, commissioner of education.

ON INDUSTRIAL EDUCATION DEPENDS WATERBURY'S FUTURE

Commissioner John H. Goss thinks an industrial school is needed right away if Waterbury, Conn., is going to maintain its industrial supremacy. The city, being far away from the source of raw material, is disadvantageously located, and was getting more so, instead of less, every year, he said. Therefore, Waterbury's only chance to maintain its supremacy in the manufacturing field lies in the skill of its workmen. And therefore, again, it is up to the city to provide a means of educating the youth of the city who are going to do the factory work of the future.

"Manual-minded" children, said Mr. Goss, should be transferred to the industrial school at the age of 12 and their education for an industrial career should then be started at once. He concluded a recent statement to the school board by saying that he voiced the sentiments of the city's manufacturers, as far as he was able to learn. He also said that the Board of Education should not restrict itself to the money now on hand for building purposes. "We can build the schools and pay for them later," he said. "The public will agree with us if we show the merit of our proposition. Waterbury's grand list is growing tremendously and will keep on growing. The city has at least 100,000 population to-day and it is going to keep right on growing."

STATE TRADE SCHOOL

(Bridgeport, Conn., *Telegram*)

"There is no question about the value of this school," the *Sunday Post* quotes William R. Webster, Jr., of the local Board of Education, in speaking of the State Trade School.

There certainly is no question of its value. Mr. Webster is a manufacturer, and he knows its utility through the skilled artisans which are graduated from it. Hundreds and hundreds of young men and women have learned, or are learning, its value, through the technical education and the improved craftsmanship which a course in the Trade School has afforded them. Those

who have taken advantage of the courses in practical trades have not only bettered themselves, have not only made it possible to secure more certain work and greater remuneration, but have bettered the community as well. Good workmanship redounds to the credit of a community, and bad workmanship gives a community a bad name that clings to all its products.

INDUSTRIAL EDUCATION IN RHODE ISLAND

(From the *Providence Journal*)

Cranston is taking up the subject of industrial education. The statement of the mayor of that city that within a few years a technical department will be added to the high school shows that the precedents set by Providence, Woonsocket and Newport are considered worth following. Newport, although not a city of mills and shops, finds industrial training of value. Providence and Woonsocket, as important centers of varied industries, never had any doubts as to the practical value of technical schools. Cranston, which is in close touch with industrial sections of the state, has more reason than Newport for taking up this branch of education, and the mayor's prediction in due time doubtless will be made good by the school authorities.

The question is one that ought to be discussed in every city and town of the State which has manufacturing interests. The rank of Rhode Island as an industrial state can be maintained best by teaching pupils how to use their hands in the useful arts. The work of the Rhode Island School of Design should be supplemented by technical instruction in the public schools. There is no danger that work on these lines will be overdone in this productive state.

DOMESTIC AND MANUAL TRAINING

(Wilkesbarre, Pa., *Record*)

Dr. Dodson's objection to having manual training and domestic science taught in the grammar grades of the public school, on the ground that the children have not the time to give to the work and are not in need of it at their time of life, is worthy of consideration. A good many other people are of Dr. Dodson's way of thinking, but their number is diminishing. The experiment is fast developing into a fixed institution and is regarded as one of the most valuable in the whole scheme of popular educa-

tion. The fact that so many of the schools throughout the country, especially in the large cities, are establishing such courses is the best evidence that they are filling a real need.

The pupils in the final grades of the grammar school are of an age when they are well fitted mentally and physically to absorb the rudiments of domestic science and manual training. If boys and girls of thirteen and fourteen years are competent to study physiology and algebra and such things, they should be competent to work with their hands and to learn something about housekeeping. Most of the pupils leave school before they reach the high school, and it seems that they should have some of the advantage of the courses before they go out in the world.

VOCATIONAL TRAINING IN NEW YORK CITY SCHOOLS

In an address before the Southeastern Vocational Education Association of New York State, Dr. William L. Ettinger, associate superintendent of schools, described the work that is going on under his supervision in the prevocational and vocational schools in New York City, detailing the function of each in the field of industrial education. The object of the prevocational school was to give the student an insight into a variety of trades and sufficient practice in them to enable him to choose the one he wished to follow and to help the instructor determine whether the student has sufficient aptitude for the particular trade to make his pursuit of it profitable. The spirit of vocational guidance pervades the work in the prevocational school. The vocational schools are for the express purpose of training the student for a particular trade, with the idea in mind that he will enter the trade as soon as he has attained sufficient skill. Dr. Ettinger advocated the extension of both types of schools, and also the idea, embodied in the junior high school, since it does for the academic school what the prevocational school does for the vocational school, namely, discovers the aptitudes of the students in the seventh, eighth and ninth years that they may be developed in the tenth, eleventh and twelfth years of the senior high school.

John Martin, chairman of the committee on vocational education of the Board of Education, explained that the board was not committed to any particular scheme of vocational education, but was trying out various systems in a critical spirit, in order that, from each or all of them, there might be obtained a system of adequate training for all the boys and girls of the city.

GENERAL EDUCATIONAL NOTES

Beginning February 29, a free night school was established in Columbus, a session of twelve weeks being contemplated. The school is under the direction of Rev. W. S. Slack, rector of St. Paul's Episcopal Church, who has had extended experience at Algiers, La., where he was formerly located, and will be assisted by Prof. W. V. Frierson, superintendent of the local public schools; Miss Helen Hutchcraft, secretary of the Young Woman's Christian Association at the Mississippi Industrial Institute and College, and also a number of the students of the college.

Prediction that Congress would provide for a national university in the District of Columbia just as soon as the pending vocational educational bill is out of the way was made recently by Representative Fess of Ohio. He said the previous bill providing for a national university was not passed because of the opposition of Secretary Lane, who took the position that the government had not done enough for the secondary schools. When I was confronted with this opposition," said Representative Fess, "I concluded to let the matter of a national university in Washington rest until the guns of the opposition had been spiked. The vocational educational bill is the one that is spiking this opposition. I have just written a favorable report on this bill and I am sure that it will pass, for I know of no bill that is so universally backed as that on vocational education. When that bill is passed it opens the way for a national university."

Financial and industrial concerns of New York and New Jersey having welfare organizations among their employees have joined with church organizations in a plan to establish an educational center at Greenwood Lake, N. J. It will be renamed Montenac and will be dedicated to social justice, social reform, civic and national patriotism and religion. The Seabury Society of Troy, N. Y., which conducts training institutes for Christian workers will have charge of the new institution.

That poverty is directly caused by industrial and social misfits of the sort that would be prevented under proper vocational guidance was one point brought out recently in the discussion of "Vocational Guidance" at the meeting of Central Philanthropic Council of Grand Rapids, Mich.

The high school in Winsted, Conn., has added to its domestic science equipment twelve enameled washtubs and a home nursing department, furnished as a bedroom. Girl pupils will be given instructions in laundry work and in home nursing under competent teachers.

Progress in the plans for forming a federation of instructors of art and allied departments of school work was indicated in reports made at the last meeting of the Louisiana Art Teach-

ers' Association. The association will interview educational leaders throughout the state, and if their attitude is favorable will undertake the formation of such a federation.

The Pittsburgh Board of Education has decided to open an elementary shop in the Hackett School, York and Sepviva streets. This section of the city is particularly lacking in facilities for instruction in shop work, all of the shops being badly overcrowded and many of the pupils going long distances to receive shop instruction.

The National Association of Teachers of Public Speaking proposes to abolish gesticulation. The idea is that gesticulation is apt to confuse thought by blending it with emotion. When a man begins to gesticulate he stops some of his thinking and makes use of his feeling. A person who thinks quietly and calmly maintains a quiet and calm condition of the body. But when he ceases to think he begins to wave his arms and shake his head. The more a man gesticulates the less he thinks, and if it is all gesticulation there is no thinking.

Fourteen apprentices from newspaper and job-printing offices attend the extension classes at the Springfield, Mass., vocational school every afternoon except Monday, and 20 men attend classes for those who have learned the trade.

Commercial education is receiving an increasing amount of attention at the hands of men who are identified with representative business interests. The National Foreign Trade Council recently presented the results of a comprehensive inquiry among employers at its convention at New Orleans, in which some of the more urgent needs of the present educational agencies were indicated. A still more recent development is the creation of a standing committee by the Chamber of Commerce of the State of New York for the purpose of dealing with the questions of commercial education.

The University of Pennsylvania has inaugurated a series of lectures dealing with the human problem in employing concerns but specifically with the work of employment and personnel departments. This series of lectures is regarded as of especial importance to the University and to the more progressive employers in the city. There is a nation-wide movement among the more thoughtful employers to devote more time to the scientific study of and attention to the human factors in management. This movement has manifested itself in the formation of employment managers' associations in six of the largest cities of the United States. One of these associations was formed among about 40 Philadelphia concerns during the last winter. The

members of these associations meet and discuss employment problems with a view to discovering the best scientific principles governing the selection, the training and the direction of labor, the reduction of excessive hiring and firing, with a view to reducing the wastes experienced by both employer and employe.

Nearly one-half of the 299,522 children of school age in Philadelphia were found by the census of Chief Henry J. Gideon, of the Bureau of Compulsory Education, to be foreign born or of foreign-born parentage, according to his annual report. Further details of the census as given by Chief Gideon show that there are 299,522 children in the city of Philadelphia between the ages of 5 and 16 years, and of this number 260,461 children are enrolled in the public, private and parochial schools, as follows: Public schools, 190,477; parochial schools, 61,573; private schools, 8,411. Those not enrolled include 18,722 employed, and 20,339 not employed. Of the 20,339 children not employed, 16,635 are between 6 and 7 years of age. When the census was taken schools were not in session, and it is believed that nearly all of the children are now enrolled in some public or private school.

A committee of the board of trustees of the Handley Fund has been appointed to visit the principal industrial schools in the United States and to consult with educational experts regarding a plan to be adopted by the trustees for carrying out the provisions of the will of the late Judge John Handley, of Scranton, Pa., who left the bulk of his estate to the city of Winchester, Va., for the erection and maintenance of industrial schools.

It may be that the service bureau which has been established at the High School in the city of Bristol, Conn., is not a new idea; nevertheless it seems to be distinctly worth calling attention to and it further seems that whoever devised the plan has taken a long step toward making the school more useful to the community and to its pupils, says the Hartford, Conn., *Post*. Manual training, stenography and typewriting are among the rudiments of education taught in the Bristol school and the service bureau has been established to be of service to the students in these courses and to those who employ persons who have such knowledge or training. In this period of prosperity when there is a great demand for help of all kinds manufacturers of Bristol have been able to tell their needs to the High School service bureau. The bureau recommends graduates of the school for positions and it has also sent out some seniors who are taking the stenographic and typewriting courses for temporary work. Thus, in the case of the graduates the school training is linked up very closely to actual employment, while in the case of those who are still pupils, very valuable actual training is given which is worth months of theoretical training and which tends to make possible the turning out of more efficient graduates.

Ten years ago not a single high school in Michigan taught agriculture in any way. Today there are fifty high schools which feature the work.

The Spokane Chamber of Commerce has asked its members to suggest what they think it and they should do the coming twelvemonth. From the replies a lengthy list of suggested activities has been compiled and distributed. Members are expected to study the list and inform the chamber what work they will do. The suggested new activities constitute an encouraging exhibit of municipal aliveness and include a salesmanship club and vocational guidance.

The entire four-years' course in Agriculture at Delaware College has been revised and strengthened to increase the efficiency of the instructions and to enable the students to get a better foundation and more detail work in the special lines in which they are working. The course, as a whole, is made up of a foundation of basic, scientific and cultural subjects, upon which is built a superstructure of work in applied science and practical work in the various branches of agriculture. No student will be given a degree in agriculture until he has gotten some practical experience upon a farm. Each student will be required to spend at least two summers, or their equivalent, in practical work, before his senior year. The amount of practice work given in the laboratories and on the farm will be materially increased to strengthen the classroom and lecture work.

"The modern youth is always looking for something easy, and would rather wear clean cuffs, with a small salary, than wear honest overalls with a much larger one," said Charles L. Jacobs, director of Vocational Guidance in the San Jose schools in a recent address.

It is estimated by the *St. Louis School Review*, based upon statistics gathered by an educator of that city, that the proportion of high school pupils taking shorthand, typewriting and other vocational subjects has increased 200 per cent. during the last twenty-five years, while at the same time the study of natural sciences and civics has decreased approximately 20 per cent. Although not so distinctly stated, it is implied that the figures relate to St. Louis schools alone, although they may be fairly typical of other cities.

Marsden G. Scott, President of the I. T. U., has called a meeting of the apprentice committee to take up school investigations and advise ways for better apprentice training. The International Typographical Union is one labor organization that has made first hand investigations of vocational training and industrial education, a commission having been appointed last year to study the teaching of trades in public schools and their effect on

labor. The commission claims that vocational training schools are at variance with the ethics of good craftsmanship when they teach the technique of the trade before the pupil has had thorough academic instruction.

Domestic science will be taught in the Madisonville, Ky., High School.

Clubwomen are interested in vocational training which will reduce the number of women entering ill-advised or unsuitable occupations. To correct this evil, the Margaret Morrison Carnegie School, of Pittsburgh, is opening this year a new department of psychology and education. This title may not be very informing, but it is explained that one of the main purposes will be to enable instructors to aid their students in discovering the vocation for which they are best fitted. A system of mental tests invented by Professor Bingham is to be used in the work of discovering the field in which the student can do the best work. There will be a special course open to teachers desiring instruction in manual training, industrial arts and kindred subjects.

Miss Lorrledge, dean of the College of Alabama, hopes to establish a vocational training school in Atlanta.

John C. Harmony, president of the Board of Education at Canton, Ohio, said, recently, that the movement on foot here to start night schools for foreign-born citizens in Canton was one of the best features of any educational system, and that in his opinion it would be but a short time until all the larger cities in the country would have these institutions.

That young people are often densely ignorant of their own city, of their own immediate environment, while learning the geography, the characteristics and products of far distant countries that not one of them is ever likely to see, has often been noted, says the Allentown, Pa., *Call*. In Philadelphia a member of the faculty of the University of Pennsylvania has suggested an "Outline Study in Community Civics" for the instruction of the children of that city in the history of the city, a study of its geography and government and an appreciation of the city in its relation to business and commerce.

The Montgomery County, Ky., High School has added a domestic science and agricultural department to its curriculum.

A series of vocational lectures was given in the Rochelle, Ill., High School; the manager of a local manufactory addressed the students on "Salesmanship"; the pastor of the Rochelle Methodist Church on "The Ministry," and then followed talks by a physician, a lawyer, a trained nurse, a chemist, a retail merchant and other business and professional men.

Committees of The National Association of Corporation Schools 1915-16

Trade Apprenticeship Schools

Mr. J. W. L. Hale, *Chairman*,
Massachusetts Board of Education,
Boston, Mass.
W. L. Chandler,
Dodge Manufacturing Co.,
Mishawaka, Indiana.
J. M. Larkin,
Fore River Shipbuilding Corporation,
Quincy, Mass.
F. W. Thomas,
Atchison, Topeka & Santa Fe Railway,
Topeka, Kansas.
Paul V. Farnsworth,
Cadillac Motor Car Co.,
Detroit, Mich.
Thomas G. Gray,
Southern Pacific Co.,
Sacramento, Cal.

Advertising, Selling and Distribution Schools

Dr. Lee Galloway, *Chairman*,
New York University,
New York, N. Y.
Professor M. T. Copeland,
Harvard Business School,
Cambridge, Mass.
O. B. Carson,
American Optical Co.,
Southbridge, Mass.
Frank L. Glynn,
Box 246,
Madison, Wis.
J. T. Spicer,
Thomas Maddock's Sons Co.,
Trenton, N. J.
F. E. Van Buskirk,
Remington Typewriter Co.,
New York, N. Y.
W. W. Kincaid,
The Spirella Co.,
Meadville, Pa.
H. G. Carnell,
The National Cash Register Co.,
Dayton, Ohio.

Accounting and Office Work Schools

George B. Everitt, *Chairman*,
National Cloak and Suit Co.,
New York, N. Y.
Dr. Louis I. Dublin,
Metropolitan Life Insurance Co.,
New York, N. Y.
R. H. Puffer,
Larkin Co.,
Buffalo, N. Y.
H. A. Hopf, Phoenix Mutual Life Insurance Co.,
Hartford, Conn.
Frederick Uhl,
American Telephone & Telegraph Co.,
New York, N. Y.
William R. DeField,
Montgomery Ward & Co.,
Chicago, Ill.

Special Training Schools

J. W. Dietz, *Chairman*,
Western Electric Co.,
Chicago, Ill.
J. E. Banks,
American Bridge Co.,
Ambridge, Pa.
Fred R. Jenkins,
Commonwealth Edison Co.,
Chicago, Ill.

Special Training Schools Continued.

W. K. Page,
Addressograph Co.,
Chicago, Ill.

Retail Salesmanship

James W. Fisk, *Chairman*,
Lord & Taylor, 5th Ave. & 39th St.,
New York, N. Y.
Miss Beulah Kennard,
49 Lafayette Street, City Building
New York, N. Y.
Miss Lilian Meyncke,
The Rike-Kumler Co.,
Dayton, Ohio.
H. G. Petermann,
United Cigar Stores Co.,
New York, N. Y.
Ralph W. Kinsey,
Dives, Pomeroy & Stewart,
Reading, Pa.

Employment Plans

F. P. Pitzer, *Chairman*,
Equitable Life Assurance Society,
New York, N. Y.
N. F. Dougherty,
The Pennsylvania Railroad Co.,
Philadelphia, Pa.
Philip J. Reilly,
Dennison Manufacturing Co.,
Framingham, Mass.
Edward B. Saunders,
Simonds Manufacturing Co.,
Fitchburg, Mass.
W. M. Skiff,
National Lamp Works, General Electric Co.,
Nela Park, Cleveland, Ohio.

Public Education

E. H. Fish, *Chairman*,
Norton & Norton Grinding Companies,
Worcester, Mass.
E. G. Allen,
Cass Technical High School,
Detroit, Mich.
Arthur E. Corbin,
Packard Motor Car Co.,
Detroit, Mich.
Arthur W. Earle,
Winchester Repeating Arms Co.,
New Haven, Conn.
Miss Harriet Fox,
Strawbridge & Clothier,
Philadelphia, Pa.

Unskilled Labor

Mr. J. E. Banks, *Chairman*,
American Bridge Company,
Ambridge, Pa.
Mr. Carl S. Coler,
Casino Technical Night School,
East Pittsburgh, Pa.
Mr. C. E. Bilton,
The Standard Mfg. Co.,
Bridgeport, Conn.
Mr. G. Guy Via,
Newport News Shipbuilding & Dry Dock Co.,
Newport News, Va.
Mr. L. T. Warner,
The Warner Brothers Company,
Bridgeport, Conn.

Committees of The National Association of Corporation Schools 1915-16—Continued

Safety and Health

Sydney W. Ashe, *Chairman*,
General Electric Co.,
Pittsfield, Mass.
L. H. Burnett,
Carnegie Steel Co.,
Pittsburgh, Pa.
Arthur T. Morey,
Commonwealth Steel Co.,
St. Louis, Mo.
J. C. Robinson,
The New York Edison Co.,
New York, N. Y.
C. B. Auel,
Westinghouse Electric & Manufacturing
Co.,
East Pittsburgh, Pa.

Allied Institutions

James A. Roosevelt, *Chairman*,
Roosevelt & Thompson,
New York, N. Y.
F. C. Henderschott,
The New York Edison Co.,
New York, N. Y.
Norman Collyer,
Southern Pacific Co.,
San Francisco, Cal.
R. L. Cooley,
Supt. Continuation Schools,
Milwaukee, Wis.

Codification Committee

Harry Tipper, *Chairman*,
The Texas Co.,
New York, N. Y.
T. M. Ambler,
Brooklyn Union Gas Co.,
Brooklyn, N. Y.
A. Blumenthal,
Bing & Bing Construction Co., Inc.,
New York, N. Y.
K. W. Waterson,
American Telephone & Telegraph Co.,
New York, N. Y.

Vocational Guidance

Dr. Henry C. Metcalf, *Chairman*,
Tufts College,
Tufts, Mass.
C. R. Sturdevant,
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